SEQENCE LISTING

<110> Sumitomo Chemical Co. Ltd. <120> Plant promoter and terminator <130> P149669 <160> 9 <210> 1 <211> 2052 <212> DNA <213> Daucus carota L. <220> <221> promoter <222> (1)...(2052) <400> 1 catgtgtgcc ctacagcaca tagggcctgt ttggttgaga gaagcagaag ctgcttctga 60 cttcttcttc ttttgacctg tttgtataaa gaagtagaaa tatttttaaa aagctgcgaa 120 tactaacttc tctctcacaa c/ttccgcttc ttttccaaac actttattaa cttttttact 180 tctcatttct actccacttc/tttgctataa gcaagaaatc acttctttta agctaaccca 240 aacggcctca ataaaagatc attcataaat gtatctttca attttaggat aacaatacgt 300 gaacagggtt atttttaac gtgtcaacaa attctaataa ttttacctgg ccggtgaaca 360 ccgtcttcca agataatata ttttaatttt gtagcctccc ttttaaccaa attcgcatgc 420 aggacgactt aggfgaatac acattgtact gtgagtcttt aaacaaagaa caagtggttc 480 atgctcagcc atcaaaattg acaaaacccg acacaacact ctatccacgt actatacttt 540 tggccgaatg/cttctcaaaa tgttttttat atgtaaaata atgcccatcc aaggataagt 600 aaaattcccg tttaaccagt ttgttaatat atatgtttac acttacaaga ggatattcgt 660 aatactitta gacgacaaga gacttaggtc aaaaatggac gctggtaaac agcctagact 720 tggt¢actga taaatagata attgttagta taatatagta ggatctacaa tgacattaaa 780 atragageta ttaattaagt taetaataaa taagagaggt tagtaaacag aaagcaggta 840 aaaacaagag cttgctgctg tgtgtttagt tgttgtgagc tcatttcttt aaaagtaatg 900

taaactgatc taaagcacat agaaatttag tacaggttaa aacttttaca agaatttata 960 ttaaacgaaa atcattttat aacatgtctc tcggctgtca ttataatagg gatcacttac 1020 tgatcatcca ttaaaacctt gttaaaacaa attcaatgag ataaaatatc ttacaatgaa 1080 aagaaggaca atgtctcttt gaaaaaacaa ataggtactc cctccgtccc tctgaaatgt 1140 atacatatgg attggacacg gagactaaga aaaatgtata aagtaatgta gagtaaaaag 1200 aaagagaaag aaaagtgggt aaagtagcgg gacccaccaa tatataattg atagatttag 1260 aaaagtagtt gaaagtagtg ggtgggtggg atttttatat tataaaaatt tactattttg 1320 agaaagtttt gaaatgtata gaattgagtg ggacatccat aaaaggaaag tgtatagaat 1380 taaatgggac agagggagta atacctttat gatatataaa tttttgttat tttgatttca 1440 taagattata aatctatgtt ataatgataa tataatttta aaaataatac tatattaatt 1500 ctgattagtc gattaccgcc ttttataatt ttacaatact gagtaatatg aataaatcag 1560 ttatctgaaa agcaaataat atctttgtaa aacagcgttc ggtcaaatgg gaagttcatg 1620 tgtattcaat agttttaata taaaagtaaa ttttaaatta attgttattt ttgtttcaga 1680 aatttaaaat aaattattga gcatgggaag ttcacgggca tcattgagca gcactagact 1740 gtttgaacaa tgtatgtccg gtgtacatct atgacctttc aactcaaact agtgaataat 1800 gcattctaga atacatcttt tcaaatttca acaaacacag ctttaacttt tctttcaacg 1860 gattggaatc cttttctaaa ctttttaaaa taaaaaaaat gcattattgt aatatttatc 1920 aacacctcaa cattgatgtt agcgtactat aaataggtgc tcttggtgct ctactatcat 1980 cacatcaatc ttacaccaca aaccttgagc ttaatttttc tacttattct cagcaataac 2040 attctaaata tc 2052

```
<210> 2
```

<400> 2

<211> 851

<212> DNA

<213> Daucus carota L.

<220>

<221> terminator

ctgaaaagga	agttcatcga	tctatcagca	aaattagaga	acttgtgagg	tcacagaagt	60
ctgaaggact	agcggaacct	gaaactgggt	ctcagaagag	gatcacctac	gagcaagtga	120
agaaaatggc	aactttattt	gatgacttgt	tgatatttat	tgagaattac	aactttgcag	180
aaaagccaac	tctgcggttt	caggttctgg	aattaattaa	gcttttacat	cactatggaa	240
gtgatactat	tcgaagcgga	gtggaggaag	aacttgagta	cgtgaatgag	aaaaattcag	300
caacacagta	caagaaagct	ctggaagtaa	tgttgagagt	atgcaataag	gagaatacgg	360
ggatacgtca	aagtatttt	tacgacacaa	tagaaaaggc	agaaagggat	aaagtgctct	420
atgaatggtg	aggaattggg	acggtttagg	ttagcttaaa	aaaagtgact	tcttacttga	480
agtaatgaag	tggagtagaa	ctgataagta	aagtaataat	tataagttat	taaagtgttt	540
ggaaaagaaa	tagaagttgt	aaagaaaagt	tagcattttc	tacttccaac	ttatttctca	600
cgacttctta	aaagtacttc	ttacttttt	acacaaacgg	gtcaaggaaa	gtggaagcaa	660
aaagctggag	ttacttctta	taagaatgtt	tatactaaat	gagaaatgac	aaacacagaa	720
atgagaatga	atatgattat	tggtttaata	atagtgtatt	ttatttaaaa	agatcgcata	7 80
cattaccagc	cagatgaagt	tattcatcac	aactcacaac	aaagtacaaa	gaaaaagttg	840
caattctgtc	a		•			851

<210> 3

<211> 2048

<212> DNA

<213> Daucus carota L.

<220>

<221> promoter

<222> (1)...(2048)

<400> 3

catgtgtgcc	ctacagcaca	tagggcctgt	ttggttgaga	gaagcagaag	ctgcttctga	60
cttcttcttc	ttttgacctg	tttgtataaa	gaagtagaaa	tatttttaaa	aagctgcgaa	120
tactaacttc	tctctcacaa	cttccgcttc	ttttccaaac	actttattaa	cttttttact	180
tctcatttct	actccacttc	tttgctataa	gcaagaaatc	acttctttta	agctaaccca	240
aacggcctca	ataaaagatc	attcataaat	gtatctttca	attttaggat	aacaatacgt	300

٤	gaacagggtt	attttttaac	gtgtcaacaa	attctaataa	ttttacctgg	ccggtgaaca	360
C	cgtcttcca	agataatata	ttttaatttt	gtagcctccc	ttttaaccaa	attcgcatgc	420
a	ggacgactt	aggtgaatac	acattgtact	gtgagtcttt	aaacaaagaa	caagtggttc	480
a	tgctcagcc	atcaaaattg	acaaaacccg	acacaacact	ctatccacgt	actatacttt	540
t	ggccgaatg	cttctcaaaa	tgttttttat	atgtaaaata	atgcccatcc	aaggataagt	600
а	aaattcccg	tttaaccagt	ttgttaatat	atatgtttac	acttacaaga	ggatattcgt	660
а	atacttta	gacgacaaga	gacttaggtc	aaaaatggac	gctggtaaac	agcctagact	720
t	ggtcactga	taaatagata	attgttagta	taatatagta	ggatctacaa	tgacattaaa	780
а	ttagagcta	ttaattaagt	tactaataaa	taagagaggt	tagtaaacag	aaagcaggta	840
а	aaacaagag	cttgctgctg	tgtgtttagt	tgttgtgcat	ttctttaaaa	gtaatgtaaa	900
С	tgatctaaa	gcacatagaa	atttagtaca	ggttaaaact	tttacaagaa	tttatattaa	960
а	cgaaaatca	ttttataaca	tgtctctcgg	ctgtcattat	aatagggatc	acttactgat	1020
С	atccattaa	aaccttgtta	aaacaaattc	aatgagataa	aatatcttac	aatgaaaaga	1080
а	ggacaatgt	ctctttgaaa	aaacaaatag	gtactccctc	cgtccctctg	aaatgtatac	1140
а	tatggattg	gacacggaga	ctaagaaaaa	tgtataaagt	aatgtagagt	aaaaagaaag	1200
а	gaaagaaaa	gtgggtaaag	tagcgggacc	caccaatata	taattgatag	atttagaaaa	1260
g	tagttgaaa	gtagtgggtg	ggtgggattt	ttatattata	aaaatttact	attttgagaa	1320
а	gttttgaaa	tgtatagaat	tgagtgggac	atccataaaa	ggaaagtgta	tagaattaaa	1380
t	gggacagag	ggagtaatac	ctttatgata	tataaatttt	tgttattttg	atttcataag	1440
a	ttataaatc	tatgttataa	tgataatata	attttaaaaa	taatactata	ttaattctga	1500
t	tagtcgatt	accgcctttt	ataattttac	aatactgagt	aatatgaata	aatcagttat	1560
С	tgaaaagca	aataatatct	ttgtaaaaca	gcgttcggtc	aaatgggaag	ttcatgtgta	1620
t	tcaatagtt	ttaatataaa	agtaaatttt	aaattaattg	ttatttttgt	ttcagaaatt	1680
t	aaaataaat	tattgagcat	gggaagttca	cgggcatcat	tgagcagcac	tagactgttt	1740
g	aacaatgta	tgtccggtgt	acatctatga	cctttcaact	caaactagtg	aataatgcat	1800
t	ctagaatac	atcttttcaa	atttcaacaa	acacagcttt	aacttttctt	tcaacggatt	1860
g	gaatccttt	tctaaacttt	ttaaaataaa	aaaaatgcat	tattgtaata	tttatcaaca	1920
C	ctcaacatt	gatgttagcg	tactataaat	aggtgctctt	ggtgctctac	tatcatcaca	1980
t	caatcttac	accacaaacc	ttgagctṭaa	tttttctact	tattctcagc	aatcacattc	2040

aggacaatgt ctctttgaaa aaacaaatag gtactccctc cgtccctctg aaatgtatac

1140

atatggattg gacacggaga ctaaga	aaaa tgtataaagt	aatgtagagt	aaaaagaaag	1200
agaaagaaaa gtgggtaaag tagcgg	gacc caccaatata	taattgatag	atttagaaaa	1260
gtagttgaaa gtagtgggtg ggtggg	attt ttatattata	aaaatttact	attttgagaa	1320
agttttgaaa tgtatagaat tgagtg	ggac atccataaaa	ggaaagtgta	tagaattaaa	1380
tgggacagag ggagtaatac ctttat	gata tataaatttt	tgttattttg	atttcataag	1440
attataaatc tatgttataa tgataa	tata attttaaaaa	taatactata	ttaattctga	1500
ttagtcgatt accgcctttt ataatt	ttac aatactgagt	aatatgaata	aatcagttat	1560
ctgaaaagca aataatatct ttgtaa	aaca gcgttcggtc	aaatgggaag	ttcatgtgta	1620
ttcaatagtt ttaatataaa agtaaa	tttt aaattaattg	ttatttttgt	ttcagaaatt	1680
taaaataaat tattgagcat gggaag	ttca cgggcatcat	tgagcagcac	tagactgttt	1740
gaacaatgta tgtccggtgt acatct	atga cctttcaact	caaactagtg	aataatgcat	1800
tctagaatac atcttttcaa atttca	acaa acacagcttt	aacttttctt	tcaacggatt	1860
ggaatccttt tctaaacttt ttaaaa	taaa aaaaatgcat	tattgtaata	tttatcaaca	1920
cctcaacatt gatgttagcg tactat	aaat aggtgctctt	ggtgctctac	tatcatcaca	1980
tcaatcttac accacaaacc ttgagc	ttaa tttttctact	tattctcagc	aatcacattc	2040
taaagatc				2048

<210> 5

<211> 2056

<212> DNA

<213> Daucus carota L.

<220>

<221> promoter

<222> (1)...(2056)

<400> 5

catgtgtgcc ctacagcaca tagggcctgt ttggttgaga gaagcagaag ctgcttctga 60
cttcttcttc ttttgacctg tttgtataaa gaagtagaaa tatttttaaa aagctgcgaa 120
tactaacttc tctctcacaa cttccgcttc ttttccaaac actttattaa cttttttact 180
tctcatttct actccacttc tttgctataa gcaagaaatc acttcttta agctaaccca 240

aacggcctca ataaaagatc attcataaat gtatctttca attttaggat aacaatacgt 300 gaacagggtt attittaac gigtcaacaa attciaataa tittaccigg ccggigaaca 360 ccgtcttcca agataatata ttttaatttt gtagcctccc ttttaaccaa attcgcatgc 420 aggacgactt aggtgaatac acattgtact gtgagtcttt aaacaaagaa caagtggttc 480 atgctcagcc atcaaaattg acaaaacccg acacaacact ctatccacgt actatacttt 540 tggccgaatg cttctcaaaa tgtttttat atgtaaaata atgcccatcc aaggataagt 600 aaaattcccg tttaaccagt ttgttaatat atatgtttac acttacaaga ggatattcgt 660 aatactttta gacgacaaga gacttaggtc aaaaatggac gctggtaaac agcctagact 720 tggtcactga taaatagata attgttagta taatatagta ggatctacaa tgacattaaa 780 attagagcta ttaattaagt tactaataaa taagagaggt tagtaaacag aaagcaggta 840 aaaacaagag cttgctgctg tgtgtttagt tgttgtgagc tcatttcttt aaaagtaatg 900 taaactgatc taaagcacat agaaatttag tacaggttaa aacttttaca agaatttata 960 ttaaacgaaa atcattttat aacatgtctc tcggctgtca ttataatagg gatcacttac 1020 tgatcatcca ttaaaacctt gttaaaacaa attcaatgag ataaaatatc ttacaatgaa 1080 aagaaggaca atgtctcttt gaaaaaacaa ataggtactc cctccgtccc tctgaaatgt 1140 atacatatgg attggacacg gagactaaga aaaatgtata aagtaatgta gagtaaaaag 1200 aaagagaaag aaaagtgggt aaagtagcgg gacccaccaa tatataattg atagatttag 1260 aaaagtagtt gaaagtagtg ggtgggtggg atttttatat tataaaaatt tactattttg 1320 agaaagtttt gaaatgtata gaattgagtg ggacatccat aaaaggaaag tgtatagaat 1380 taaatgggac agagggagta atacctttat gatatataaa tttttgttat tttgatttca 1440 taagattata aatctatgtt ataatgataa tataatttta aaaataatac tatattaatt 1500 ctgattagtc gattaccgcc ttttataatt ttacaatact gagtaatatg aataaatcag 1560 ttatctgaaa agcaaataat atctttgtaa aacagcgttc ggtcaaatgg gaagttcatg 1620 tgtattcaat agttttaata taaaagtaaa ttttaaatta attgttattt ttgtttcaga 1680 aatttaaaat aaattattga gcatgggaag ttcacgggca tcattgagca gcactagact 1740 gtttgaacaa tgtatgtccg gtgtacatct atgacctttc aactcaaact agtgaataat 1800 gcattctagc tagaatacat cttttcaaat ttcaacaaac acagctttaa cttttctttc 1860 aacggattgg aatccttttc taaacttttt aaaataaaaa aaatgcatta ttgtaatatt 1920 tatcaacacc tcaacattga tgttagcgta ctataaatag gtgctcttgg tgctctacta 1980

tcatcacatc aatcttacac cacaaacctt gagcttaatt tttctactta ttctcagcaa 2040 tcacattcta aagatc 2056 <210> 6 <211> 739 <212> DNA <213> Daucus carota L. <220> <221> cDNA (14)...(478)<300> <301>Mika Yamamoto <302>A Major Root Protein of Carrots with High Homology to Intercellular Pathogenesis-Related(PR) Proteins and Pollen Allergens <303>Plant Cell Physiology <304>38 <305>9 <306>1080-1086 <307>D88388 1993-12-24 1995-07-25 <400> 6 cattctaaat atc atg ggt gcc cag agc cat tca ctc gag atc act tct 49 met gly ala gln ser his ser leu glu ile thr ser 10

97

tca gtc tcc gca gag aaa ata ttc agc ggc att gtc ctt gat gtt gat

ser	val	ser	ala	glu	lys	ile	phe	ser	gly	ile	val	leu	asp	val	asp	٠	
		15					20					25			•		
														•			•
aca	gtt	att	ссс	aag	gct	gcc	ссс	gga	gct	tac	aag	agt	gtc	gat	gtt		145
thr	val	ile	pro	lys	ala	ala	pro	gly	ala	tyr	lys	ser	val	asp	val		
	30	٠				35					40						
aaa	gga	gac	ggt	gga	gct	gga	acc	gtc	aga	att	atc	acc	ctt	ccc	gaa		193
lys	gly.	asp	gly	gly	ala	gly	thr	val	arg	ile	ile	thr	l eu	pro	glu		
45					50					55					60		
ggt	agc	cca	atc	acc	ťca	atg	acg	gtt	agg	act	gat	gca	gtg	aac	aag		241
gly	ser	pro	ile	thr	ser	met	thr	val	arg	thr	asp	ala	val	asn	lys		
				65					70					75			
gag	gcc	ttg	aca	tac	gat	tcc	aca	gtc	att	gat	gga	gac	atc	ctt	cta		289
glu	ala	leu	thr	tyr	asp	ser	thr	val	ile	asp	gly	asp	ile	leu	leu		
			80					85					90				
							•							•	•		
gaa	ttc	atc	gaa	tcc	att	gaa	acc	cat	atg	gta	gtt	gtg	cca	act	gct		337
glu	phe	ile	glu	ser	ile	glu	thr	his	met	val	val	val	pro	thr	ala		
		95]	00		•]	105				•	
gac	gga	ggt	agc	att	acc	aag	acc	act	gcc	ata	ttc	cac	acc	aaa	ggc		385
asp	gly	gly	ser	ile	thr	lys	thr	thr	ala	ile	phe	his	thr	lys	gly		
1	10				.]	15]	20						
			•														
gat	gcc	gtg	gtt	cct	gag	gag	aac	atc	aag	ttt	gca	gat	gct	cag	aac		433
asp	ala	val	val	pro	glu	glu	asn	ile	lys	phe	ala	asp	ala	gln	asn		
125					130					135	•				140		

act gct ctt ttc aag gct att gag gcc tac ctc	att gct aat taa gctga	483
thr ala leu phe lys ala ile glu ala tyr leu	ile ala asn stop	
145 150	155	
·		
gctctcaact tccgtaattt tatgagtgag tggaggaatt	gcaacgtttt cttttgtgtt	543
ttgttttcga gcaacttcat aatttacaga gtgagtgaca	gtcagtgaca gaattgcaac	603
tttctctttg tactttgttg tgacttgtga tgaataactt	catctggctg gtaatgtatg	663
cgatcttttt aaataatatg cactattatt aaaccaataa	tcatattcat tctcaaaaaa	723
aaaaaaaaa aaaaaa		739
<210> 7	·	
<211> 2052	•	
<212> DNA	•	
<213> Daucus carota L.		•
<220>		
<221> promoter		
<222> (1)(2052)		-
<400> 7		
catgtgtgcc ctacagcaca tagggcctgt ttggttgaga	gaagcagaag ctgcttctga	60
cttcttcttc ttttgacctg tttgtataaa gaagtagaaa	tatttttaaa aagctgcgaa	120
tactaacttc tctctcacaa cttccgcttc ttttccaaac	actttattaa cttttttact	180
tctcatttct actccacttc tttgctataa gcaagaaatc	acttctttta agctaaccca	240
aacggcctca ataaaagatc attcataaat gtatctttca	attttaggat aacaatacgt	300
gaacagggtt atttttaac gtgtcaacaa attctaataa	ttttacctgg ccggtgaaca	360
ccgtcttcca agataatata ttttaatttt gtagcctccc	ttttaaccaa attcgcatgc	420
aggacgactt aggtgaatac acattgtact gtgagtcttt	aaacaaagaa caagtggttc	480
atgctcagcc atcaaaattg acaaaacccg acacaacact	ctatccacgt actatacttt	540
taaccasta cttctcssss tatttttst statssssts	atroccator aggregationst	600

aaaattcccg tttaaccagt ttgttaatat atatgtttac acttacaaga ggatattcgt 660 aatactttta gacgacaaga gacttaggtc aaaaatggac gctggtaaac agcctagact 720 tggtcactga taaatagata attgttagta taatatagta ggatctacaa tgacattaaa 780 attagagcta ttaattaagt tactaataaa taagagaggt tagtaaacag aaagcaggta 840 aaaacaagag cttgctgctg tgtgtttagt tgttgtgagc tcatttcttt aaaagtaatg 900 taaactgatc taaagcacat agaaatttag tacaggttaa aacttttaca agaatttata 960 ttaaacgaaa atcattttat aacatgtctc tcggctgtca ttataatagg gatcacttac 1020 tgatcatcca ttaaaacctt gttaaaacaa attcaatgag ataaaatatc ttacaatgaa 1080 aagaaggaca atgtctcttt gaaaaaacaa ataggtactc cctccgtccc tctgaaatgt 1140 atacatatgg attggacacg gagactaaga aaaatgtata aagtaatgta gagtaaaaag 1200 aaagagaaag aaaagtgggt aaagtagcgg gacccaccaa tatataattg atagatttag 1260 aaaagtagtt gaaagtagtg ggtgggtggg atttttatat tataaaaatt tactattttg 1320 agaaagtttt gaaatgtata gaattgagtg ggacatccat aaaaggaaag tgtatagaat 1380 taaatgggac agagggagta atacctttat gatatataaa tttttgttat tttgatttca 1440 taagattata aatctatgtt ataatgataa tataatttta aaaataatac tatattaatt 1500 ctgattagtc gattaccgcc ttttataatt ttacaatact gagtaatatg aataaatcag 1560 ttatctgaaa agcaaataat atctttgtaa aacagcgttc ggtcaaatgg gaagttcatg 1620 tgtattcaat agttttaata taaaagtaaa ttttaaatta attgttattt ttgtttcaga 1680 aatttaaaat aaattattga gcatgggaag ttcacgggca tcattgagca gcactagact 1740 gtttgaacaa tgtatgtccg gtgtacatct atgacctttc aactcaaact agtgaataat 1800 gcattctaga atacatcttt tcaaatttca acaaacacag ctttaacttt tctttcaacg 1860 gattggaatc cttttctaaa ctttttaaaa taaaaaaaat gcattattgt aatatttatc 1920 aacacctcaa cattgatgtt agcgtactat aaataggtgc tcttggtgct ctactatcat 1980 cacatcaatc ttacaccaca aaccttgagc ttaatttttc tacttattct cagcaatcac 2040 attctaaaga tc 2052